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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants Kobayashi et al.

Art Unit: Not Yet Assigned

Serial No.: 10/526,650 ✓

Examiner: Not Yet Assigned

Filed: March 3, 2005

Customer No.: 21559

Title: METHODS OF PRODUCING A VIRAL VECTOR COMPRISING
A MEMBRANE PROTEIN THAT BINDS TO SIALIC ACID AS A
COMPONENT OF THE ENVELOPE USING NEURAMINIDASE
DERIVED FROM GRAM-POSITIVE BACTERIA

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INFORMATION DISCLOSURE STATEMENT

Applicants submit the references listed on the enclosed Form PTO-1449, copies of which are enclosed, with the exception of U.S. patents and U.S. patent application publications.

The present application is the U.S. national stage of PCT/JP2003/011299. The following references, which are enclosed, were cited in the International Search Report

for PCT/JP2003/0112. A copy of the International Search Report was submitted in the present U.S. national stage application on March 3, 2005.

Yang et al., "Hemagglutinin Specificity and Neuraminidase Coding Capacity of Neuraminidase-Deficient Influenza Viruses," *Virology* 229(1):155-165 (1997).

WO 01/92508 A1

Sun et al., "Neuraminidase From A Bacterial Source Enhances Both HIV-1-Mediated Syncytium Formation and the Virus Binding/Entry Process," *Virology* 284(1):26-36 (2001).

Bosch et al., "Inhibition of Release of Lentivirus Particles With Incorporated Human Influenza Virus Haemagglutinin By Binding To Sialic Acid-Containing Cellular Receptors," *J. Gen. Virol.* 82(Pt. 10):2485-2494 (2001).

Lin and Cannon, "Use of Pseudotyped Retroviral Vectors to Analyze the Receptor-Binding Pocket of Hemagglutinin From a Pathogenic Avian Influenza A Virus (H7 Subtype)," *Virus Res.* 83(1-2):43-56 (2002).

Kobayashi et al., "Pseudotyped Lentivirus Vectors Derived from Simian Immunodeficiency Virus SIVagm with Envelope Glycoproteins from Paramyxovirus," *J. Virol.* 77(4):2607-2614 (2003).

WO 03/066868 A1

WO 99/13905 A1

WO 01/92508 is written in the Japanese language. English translation of this reference is also enclosed.

Submission of this statement is not a representation that a search has been made, nor is the inclusion of information in this statement an admission that the information is material to patentability.

This statement is being filed before the receipt of a first Office action on the merits.

If there are any charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date:

8 July 2005



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Attorney Docket Number: 50026/050001

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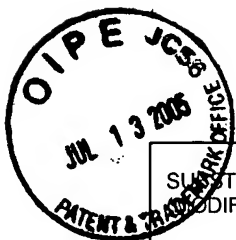
Applicant/Patentee: Kobayashi et al.
Serial/Patent Number: 10/526,650
Filed/Issued: March 3, 2005

Title: Methods of Producing A Viral Vector Comprising A Membrane Protein That

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STATEMENT BY APPLICANT
(Use several sheets if necessary)

(37 C.F.R. § 1.98(b))

Attorney D No.

50026/050001

Serial No.

10/526,650

Applicant

Kobayashi et al.

Filing Date

March 3, 2005

Group

Not Yet Assigned

IDS Filed

July 8, 2005

U.S. PATENT DOCUMENTS

Examiner's Initials	Document Number	Issue or Publication Date	Patentee or Applicant	Class	Subclass	Filing Date (If Appropriate)
	6,645,760	Nov. 11, 2003	Nagai et al.			
	6,723,532	Apr. 20, 2004	Nagai et al.			
	6,746,860	Jun. 8, 2004	Tokusumi et al.			
	6,828,138	Dec. 7, 2004	Nagai et al.			
	2002/0098576	Jul. 25, 2002	Nagai et al.			
	2002/0002143	Jan. 03, 2002	Kano et al.			
	2003/0170210	Sep. 11, 2003	Masaki et al.			
	2003/0170897	Sep. 11, 2003	Imai et al.			
	2004/0121308	Jun. 24, 2004	Nagai et al.			
	2003/0170266	Sep. 11, 2003	Kitazato et al.			
	2004/0005296	Jan. 8, 2004	Yonemitsu et al.			
	2004/0053877	Mar. 18, 2004	Fukumura et al.			
	2004/0101965	May 27, 2004	Griesenbach et al.			
	2003/0166252	Sep. 4, 2003	Kitazato et al.			
	2003/0203489	Oct. 30, 2003	Yonemitsu et al.			

FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
	WO 99/13905 A1	Mar. 25, 1999	WIPO			
	WO 01/92508 A1	Dec. 6, 2001	WIPO			Yes
	WO 02/038726 A2, A3	May 16, 2002	WIPO			
	WO 03/066868 A1	Aug. 14, 2003	WIPO			

EXAMINER

DATE CONSIDERED

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SUBSTITUTE FORM PTO-1 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Attorney D. No. 50026/050001	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)				Serial No. 10/526,650	
(37 C.F.R. § 1.98(b))				Applicant Kobayashi et al.	
				Filing Date March 3, 2005	
				Group Not Yet Assigned	
				IDS Filed July 8, 2005	
U.S. PATENTS					
Examiner's Initials	Patent Number	Issue Date	Patentee	Class	Filing Date (If Appropriate)
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION					
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Translation (Yes/No)
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)					
	Agrawal et al., "Cell-Cycle Kinetics and VSV-G Pseudotyped Retrovirus-Mediated Gene Transfer in Blood-Derived CD34 ⁺ Cells," <i>Exp. Hematol.</i> 24:738-747 (1996).				
	Bosch et al., "Inhibition of Release of Lentivirus Particles With Incorporated Human Influenza Virus Haemagglutinin By Binding To Sialic Acid-Containing Cellular Receptors," <i>J. Gen. Virol.</i> 82(Pt. 10):2485-2494 (2001).				
	Burns et al., "Vesicular Stomatitis Virus G Glycoprotein Pseudotyped Retroviral Vectors: Concentration to Very High Titer and Efficient Gene Transfer into Mammalian and Nonmammalian Cells," <i>Proc. Natl. Acad. Sci. USA</i> 90(17):8033-8037 (1993).				
	Compans et al., "Effect of Antibody to Neuraminidase on the Maturation and Hemagglutinating Activity of an Influenza A ₂ Virus," <i>J. Virol.</i> 4(4):528-534 (1969).				
	Dong et al., "A Chimeric Avian Retrovirus Containing the Influenza Virus Hemagglutinin Gene Has an Expanded Host Range," <i>J. Virol.</i> 66(12):7374-7382 (1992).				
	Griffin et al., "Effects of Hexose Starvation and the Role of Sialic Acid in Influenza Virus Release," <i>Virology</i> 125(2):324-334 (1983).				
	Hatzioannou et al., "Incorporation of Fowl Plague Virus Hemagglutinin into Murine Leukemia Virus Particles and Analysis of the Infectivity of the Pseudotyped Retroviruses," <i>J. Virol.</i> 72(6):5313-5317 (1998).				
	Kobayashi et al., "Pseudotyped Lentivirus Vectors Derived from Simian Immunodeficiency Virus SIVagm with Envelope Glycoproteins from Paramyxovirus," <i>J. Virol.</i> 77(4):2607-2614 (2003).				
	Lin and Cannon, "Use of Pseudotyped Retroviral Vectors to Analyze the Receptor-Binding Pocket of Hemagglutinin From a Pathogenic Avian Influenza A Virus (H7 Subtype)," <i>Virus Res.</i> 83(1-2):43-56 (2002).				
	Liu et al., "Influenza Type A Virus Neuraminidase Does Not Play A Role in Viral Entry, Replication, Assembly, Or Budding," <i>J. Virol.</i> 69(2):1099-1106 (1995).				
	Morrison et al., "Complementation between Avirulent Newcastle Disease Virus and a Fusion Protein Gene Expressed from a Retrovirus Vector: Requirements for Membrane Fusion," <i>J. Virol.</i> 65(2):813-822 (1991).				
	Morse et al., "Optimizing Influenza Hemagglutinin Pseudotyping of Equine Lentiviral Vectors," <i>Mol. Ther.</i> 5(5 Pt. 2):S38(ABSTRACT110) (2002).				
EXAMINER			DATE CONSIDERED		
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.					

SUBSTITUTE FORM PTO-17 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Attorney D. No.		50026/050001	
				Serial No.		10/526,650	
				Applicant		Kobayashi et al.	
				Filing Date		March 3, 2005	
				Group		Not Yet Assigned	
				IDS Filed		July 8, 2005	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)							
(37 C.F.R. § 1.98(b))							
U.S. PATENTS							
Examiner's Initials	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date (If Appropriate)	
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION							
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)	
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)							
	Négre et al., "Characterization of Novel Safe Lentiviral Vectors Derived From Simian Immunodeficiency Virus (SIVmac251) That Efficiently Transduce Mature Human Dendritic Cells," <i>Gene Ther.</i> 7(19):1613-1623 (2000).						
	Palese et al., "Characterization of Temperature Sensitive Influenza Virus Mutants Defective in Neuraminidase," <i>Virology</i> 61(2):397-410 (1974).						
	Sakurada et al., "Cloning, Expression, and Characterization of the <i>Micromonospora viridifaciens</i> Neuraminidase Gene in <i>Streptomyces lividans</i> ," <i>J. Bacteriol.</i> 174(21):6896-6903 (1992).						
	Schnell et al., "Development of a Self-Inactivating, Minimal Lentivirus Vector Based on Simian Immunodeficiency Virus," <i>Hum. Gene Ther.</i> 11(3):439-447 (2000).						
	Spiegel et al., "Asialoglycoprotein (ASGP-R)-Restricted Gene Transfer by Retroviral Particles Pseudotyped with Sendai Virus F Protein," <i>Hepatology</i> (Abstract 1429) 28:520A (1998).						
	Spiegel et al., "Pseudotype Formation of Moloney Murine Leukemia Virus with Sendai Virus Glycoprotein F," <i>J. Virol.</i> 72(6):5296-5302 (1998).						
	Sun et al., "Neuraminidase From A Bacterial Source Enhances Both HIV-1-Mediated Syncytium Formation and the Virus Binding/Entry Process," <i>Virology</i> 284(1):26-36 (2001).						
	Vzorov and Compans, "Effect of the Cytoplasmic Domain of the Simian Immunodeficiency Virus Envelope Protein on Incorporation of Heterologous Envelope Proteins and Sensitivity to Neutralization," <i>J. Virol.</i> 74(18):8219-8225 (2000).						
	Yang et al., "Hemagglutinin Specificity and Neuraminidase Coding Capacity of Neuraminidase-Deficient Influenza Viruses," <i>Virology</i> 229(1):155-165 (1997).						
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